AGILE TRANSPORTATION FOR THE 21ST CENTURY

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PERCEIVED MILITARY NEED

(What is the Problem?)

- **Strategic Planning for the DTS**
  - **Reduction in number of airframes (phase out of 240+ C141s - replaced by 120 C17s) will increasingly stress DTS management capabilities**
  - **USTRANSCOM currently relies on inefficient processes to support mode determination, optimization and coordination with CINCs, Services, Components**
- **These processes would be improved by:**
  - **A transportation request process which determines requirements based on objective, time-based delivery criteria *rather than relying on a customer's stated preference for air transportation***
  - **Assignment to sealift of all movement requirements which are qualified for sealift will automatically increase utilization of scarce airlift assets for true *mission critical* requirements**

AT2000 OVERVIEW

- **AT2000 will enable the DTS to more effectively and rapidly respond to 21st Century force projection requirements**
  - **Four year, $45M Advanced Concept Technology Demo**
  - **By 2006, AT2000 will enable the planner to determine, within four hours, the best transportation plan for a supported CINC's contingency**
  - **AT2000 efficiencies will lead to $40M per year DTS cost avoidance for the four Services**

AT2000 FOCUS

- **USTRANSCOM ACTD**
  - **Functional Focus**
    - **DTS decision support tools for peacetime & contingencies**
    - **Improved responsiveness and effectiveness**
    - **Cost avoidance**
  - **Technology Focus**
    - **Collaborative environments for DTS requirements**
    - **Scheduling & asset management**
    - **DTS visualization**
- **Targeted for GTN 21 / DTS C^2 systems**

AT2000+ Improves Force Projection

REQUIREMENTS DISCIPLINE

UNIT CARGO LOADING ACTIVITIES

POE DELIVERIES

PORT TERMINAL OPS

STRATEGIC LIFT MANAGEMENT

POD DELIVERIES

JRSOI LINK-UP

TAA/FOXHOLE

SUSTAINMENT

REDEPLOY

PHASE I SITUATION DEVELOPMENT

PHASE II CRISIS ASSESSMENT

PHASE III COA DEVELOPMENT

PHASE IV COA SELECTION

PHASE V EXECUTION PLANNING

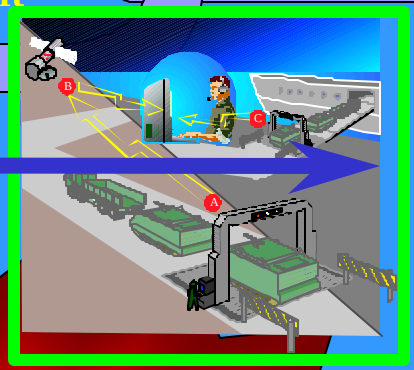
PHASE VI EXECUTION

AT2000+

AT2000 TECHNOLOGY

Supply Chain Management Focus

Planning Activities → Unit Deployment → Move to POE → TML Operations → Strategic Lift → Reception Ops



Technology

Planning Activities

Unit Activities

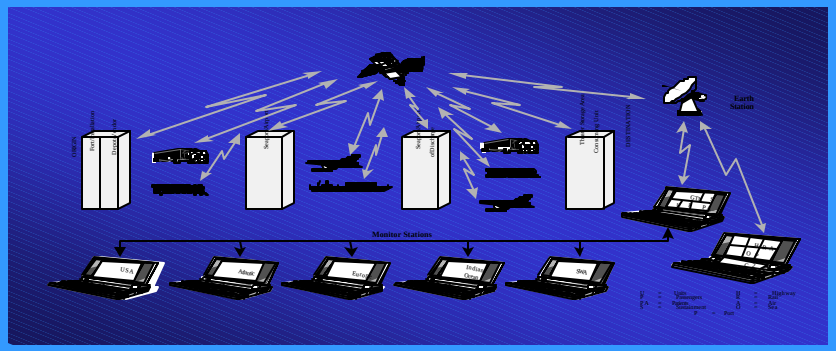
Movement to POEs

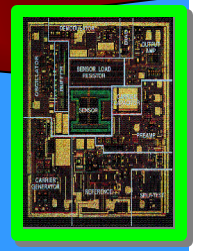
POE Terminal Ops

Strategic Lift

POD Terminal Op

Emerging, robust, commercially viable technology





Movement to Marshalling Area/Tactical Assembly Area

Preparation for Combat

Combat

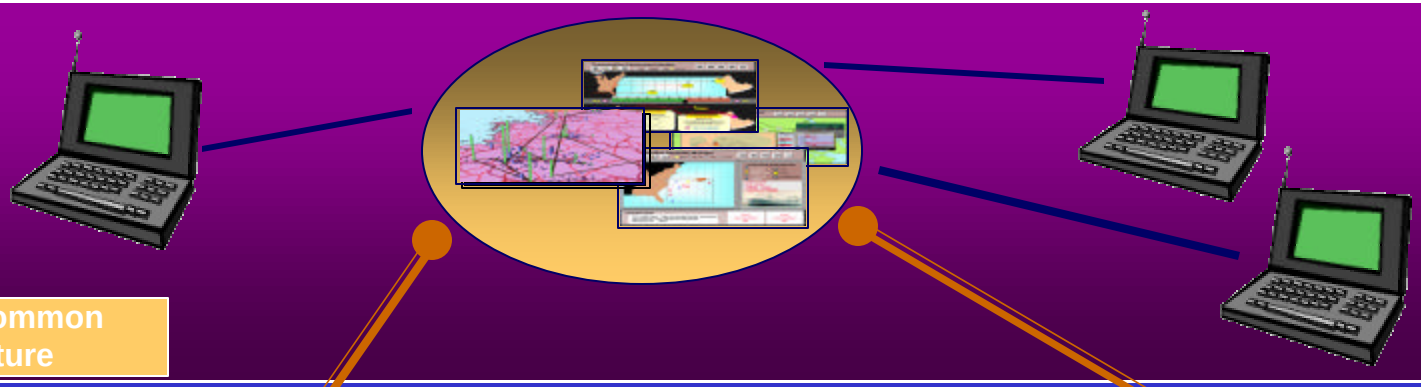
AT2000 TECHNOLOGY FOCUS

- **Area A1: DTS Requirements Capture**
  - **Collaborative environment for sharing requirements and demand/fill status:**
    - **Address total DTS requirements**
      - **Force Projection Requirements (TPFDDs, etc)**
      - **Routine Title 10**
- **Area A2: Mode Determination and Asset Scheduling**
  - **Supply chain management approach to improve responsiveness and reduce cost of DTS operations**
  - **Decision support tools to view, allocate and monitor scheduled and in-transit shipments**
- **Area A3: DTS Situational Awareness**
  - **Web-based query services to support ad-hoc and aggregated queries at all levels**
  - **Common Force Projection Picture**
  - **Visibility of force structure, load availability, in-repair and in-use status of air and sea assets**

AT2000 INTEGRATED VISION

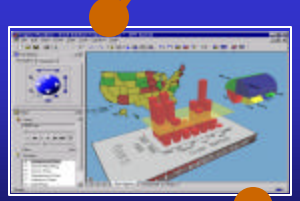
Collaborative Tailored Views

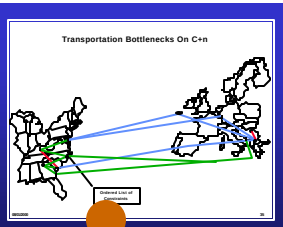
Feeds to Common DTS Picture

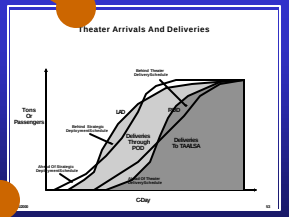


Optimization

DTS Strategic and Operational Applications







MCC INFO Integration

Integrated Information Solution

VDE

Data Source

Existing Databases

GTN 21

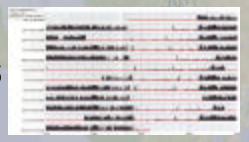
WX

M&S

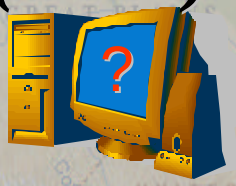
Data XYZ

AT2000: Mode Determination Broker (MDB)

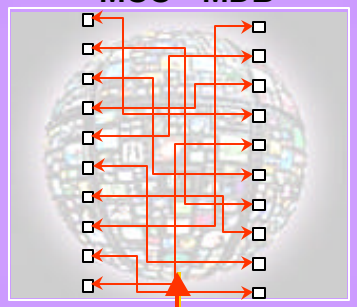
DTS Analysis

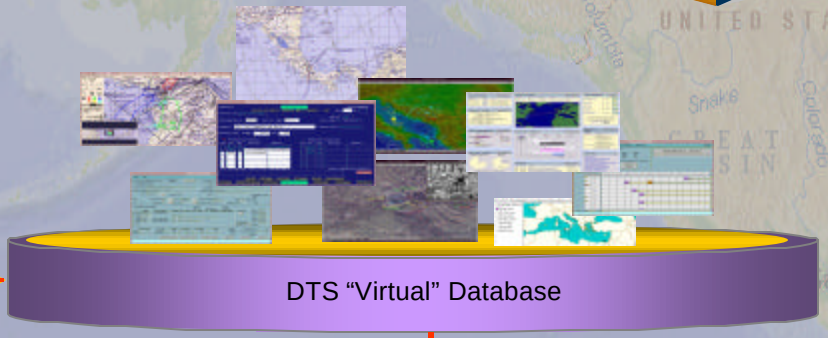


"What if" prediction



MCC - MDB



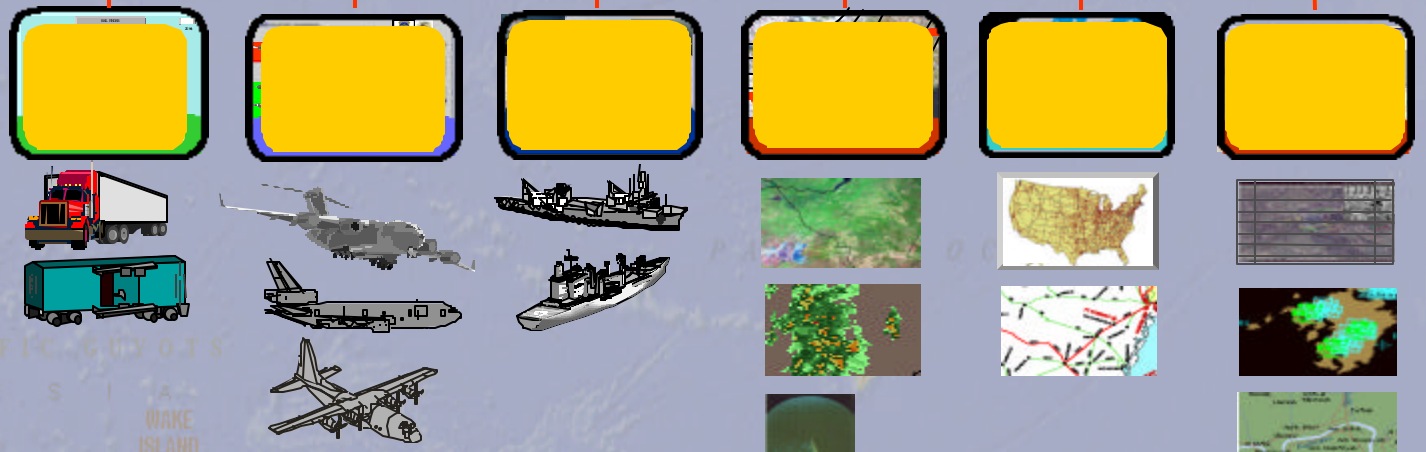


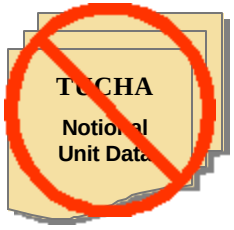
DTS "Virtual" Database

Mode Determination

Aggregation Solutions

Cost Benefit





AT2000: Concept Vision

US TRANSCOM

Strategic Lift

Supported CINC

Mission: Peacekeeping - PDZ

Objective 1:

Task 1:

Task 2:

CINC Components

Force Specification:

JFCOM Components

Force Specification:

	Op_Area	S -DTG	E- DTG	ULN	HS	RDD	Dest	CurLoc	RdStat	RLD	UIC	HS	RDD	CurLoc	RdStat	RLD
Task 1:	GGF	020102Z	023002Z	XDEBP		010902Z	UJ	TJT	GGGGG	012302Z	WSEBP	DFT	*	UJN	GGG	012302Z
				XDECP		010902Z	UJ	TJT	GGGGG	012302Z	WSERP	DFT	*	PPT	GGG	012302Z
				XDEDP		010902Z	UJ	TJT	GGGGG	012302Z	WSERP	DFT	*	UJN	GRG	012302Z
Task 2:	FGT	020202Z	023002Z	XDEBC		010902Z	UJ	TJT	GGGGG	012302Z	WSERC	DFT	*	UJN	GGGGG	012302Z

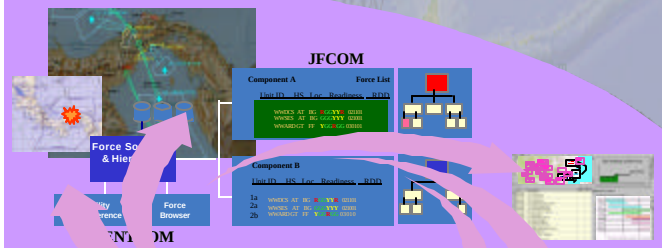
SOUTHCOM CHANNAL FLTS

Mode	POE	POD	ALD	EAD	Type	ID	ETD	ETA	ATD	Type	ID	ATA
Air	UJ	GGR	012002Z	012202Z	C-141	XX12c	012002Z	012202Z	012202Z	Trk	A14	012302Z
Air	UJ	GGR	012002Z	012202Z								
Air	UJ	GGR	012002Z	012202Z	C-17	BVF2	012002Z	012202Z	012202Z	Trk	A77	012302Z
Air	UJ	GGR	012002Z	012202Z	C-17	BVF4	012002Z	012202Z	012202Z	Trk	A23	012302Z
Air	UU	GGA	011002Z	012302Z	C 5A	BVF-10	11002Z	012302Z	012302Z	Trk	A77	012302Z

GULF COAST VESSELS

Sea	UUO	GGA	011002Z	012302Z	LMSR	SS-1	011002Z	012302Z				
Sea	UUO	GGA	011002Z	012302Z	LMSR	SS-1	011002Z	012302Z				
Sea	UUO	GGA	011002Z	014302Z								

JRSOI



DTS "Virtual" Database

REAL WORLD TRANSPORTATION SITUATION UPDATES

USTC - MCC

CONTINGENCY ALERT

OPLAN TPFDD

Personal Property
Sustainment
Patient
Special Moves

BEYOND T.O.s AUTHORITY

AMC

USTC

MTMC

MSC

Personal Property
Sustainment
Patient
Special Moves

SHIPPER

Origin

CARRIERS

CP

POE

Dest.

CARRIERS

POD

CONSIGNEE

Dest.

WITHIN T.O. DAY TO DAY AUTHORITY

USTRANSCOM MANAGEMENT OF THE DTS

- **Strategic Planning (USTRANSCOM)**
  - **Mode determination and optimization for strategic lift determined by objective, time-based delivery criteria**
  - **Assignment to sealift of all movement requirements which are qualified for sealift will automatically increase utilization of scarce airlift assets for true *mission critical* requirements**
  - **Coordination and strategic plan repair**
- **Operational Planning (Transportation Component Commands)**
  - **Plan for missions, ships sailing**
  - **Subject to DTS strategic operating plan**
- **Tactical Planning and Execution (Scheduling) (Installations)**
  - **DTS units: specific crew names, tail numbers, AIT, etc.**

SPENDING PROFILE

	FY02	*FY03*	*FY04*	*FY05*	
Collab. Data Gathering	2.50	4.70	5.50	3.50	36.07%
Scheduling/Decis.Spt	0.90	2.70	3.00	2.00	19.15%
DTS Visualization	0.25	0.75	0.75	0.75	5.57%
System Support	0.50	1.50	1.25	1.75	11.14%
Program Management	0.50	1.00	1.00	1.00	7.80%
Integ/Demo/Trans	0.25	1.00	2.00	5.85	20.27%
Total ($M)	4.90	11.65	13.50	14.85	44.90

FUNDING PROFILE

	FY02	*FY03*	*FY04*	*FY05*	
DUSD (AS&C)	2.72	2.72	2.72	0.80	19.96%
AITS JPO	2.00	2.00	2.00	2.00	17.82%
DUSD (AP)	0.77	0.77	0.77	0.77	6.86%
USAF	3.59	3.59	3.59	3.59	31.98%
USA	1.38	1.38	1.38	1.38	12.29%
USN	0.75	0.75	0.75	0.75	6.68%
USMC	0.50	0.50	0.50	0.50	4.45%
Total ($M)	11.71	11.71	11.71	9.79	44.90

APPORTIONED FUNDING

- **Based on FY01 TWCF revenues**
  - **USAF =58%, USA =22%, USN =12% , USMC =8%**
- **Total $44.9M Required**
  - **Less $8.98M from DUSD (AS&C)(20%)**
  - **Less $8M from AITS JPO**
  - **Less $4.4M from DUSD (Agile Port - CCDoTT)**
- **Remaining $24.84M Required from Services**
  - **USAF (58%) = $10.35M**
  - **AMC = $4.0M**
  - **USA (22%) = $5.5M**
  - **USN (12%) = $3M**
  - **USMC (8%) = $2M**

COST AVOIDANCE
$40.0M ANNUALLY

Based on FY01 TWCF budgets, this estimate assumes a very conservative savings of 7%, which has been extrapolated from improved resource utilization based on results demonstrated by similar IT efforts in commercial transportation.

Apportioned to Services

USAF	USA	USN	USMC
$24.2M	$9.3M	$4.7M	$1.8M

BACKUPS

AT2000+ - SUPPORT FOR STRATEGIC DEPLOYMENT

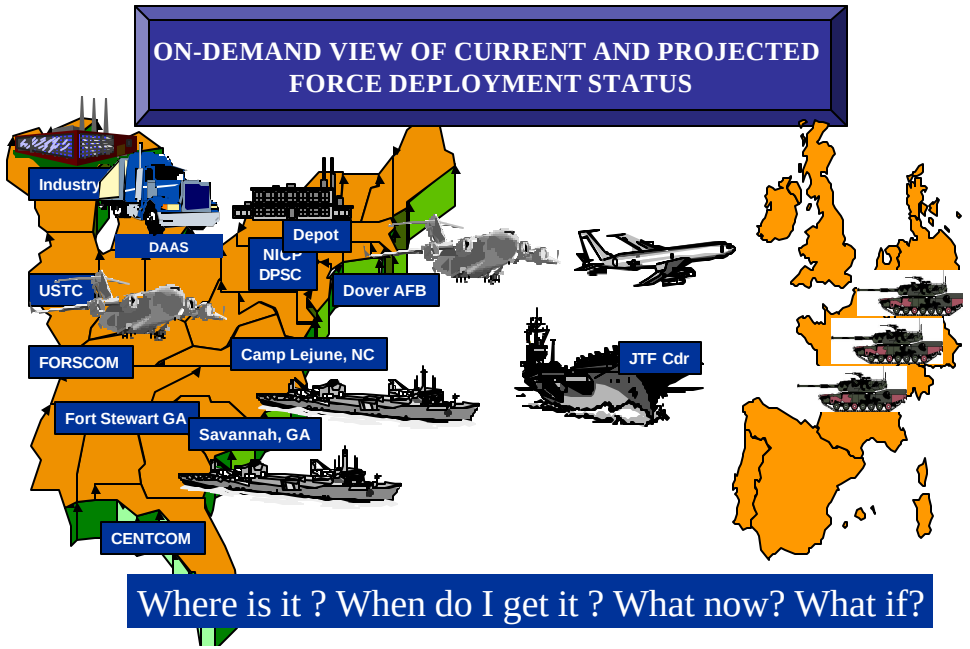
"Agile, Precise and Synchronized Force Deployments"

- Worldwide information architecture
- Integrated joint theater logistics management
- Responsive strategic lift

to ensure:

"Rapid Decisive Operations"

AT 2000 VISION

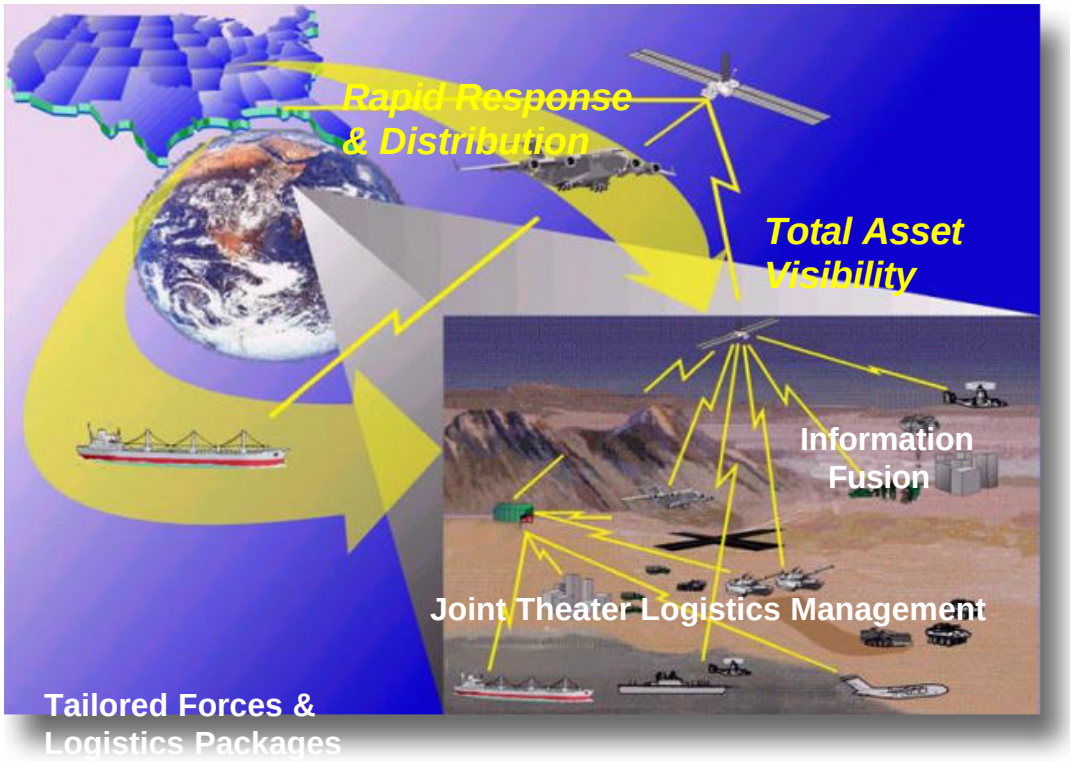


AT2000+
SUPPORT FOR FLEEDO

“Rapid Crisis Response” *through*
- Collaborative demand/fill data sharing
- Tailored packages delivered direct to user
- Assets tracked/shifted en-route
- Visibility at all levels

enabling:

“Rapid Decisive Operations”



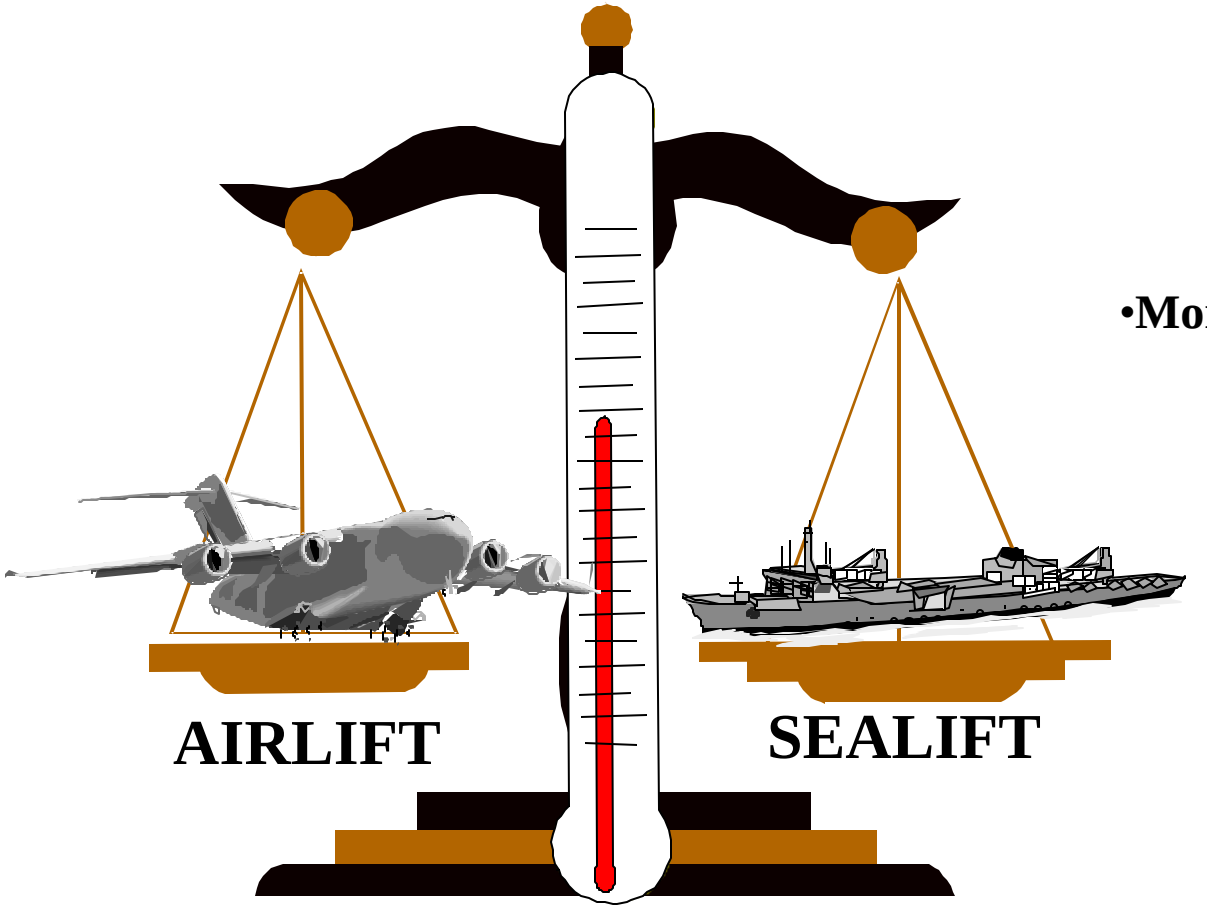
Focused Logistics: Enabling Early Decisive Operations (FLEEDO)

AT2000 TECHNOLOGY FOCUS

Collaborative Command and Control Capability that addresses three key technology areas

- Area A1: DTS Requirements Capture
  - Collaborative environment for sharing requirements and demand/fill status
    - Address total DTS requirements
      - » Force Projection Requirements (TPFDDs, etc)
      - » Routine Title 10
- Area A2: Mode Determination and Asset Scheduling
  - Supply chain management approach to improve responsiveness and reduce cost of DTS operations
  - Decision support tools to view, allocate and monitor scheduled and in-transit shipments
- Area A3: DTS Situational Awareness
  - Web-based query services to support ad-hoc and aggregated queries at all levels
  - Common Force Projection Picture

IMPROVING THE BALANCE OF DTS UTILIZATION



DTS mode determination and optimization

- **More responsive to operator**
  - **Sealift used to move specific heavy unit equipment into AOR to meet CINC's CONOPS**
  - **Airlift provides focused early entry capability for key units**
  - **Proactive mode balancing supports our force projection requirements**
- **More efficient use of airlift and sealift**
  - **focused on specific DTS requirements**

COLLABORATIVE DEPLOYMENT PLANNING & EXECUTION

WARNING ORDER

ALERT ORDER

PREP TO DEP ORDER

PHASE I SITUATION DEVELOPMENT

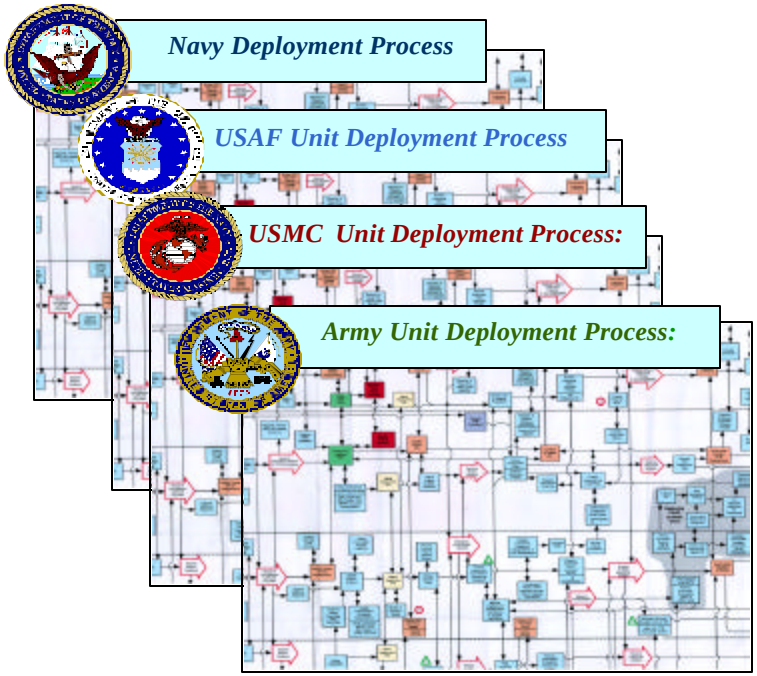
PHASE II CRISIS ASSESSMENT

PHASE III COA DEVELOPMENT

PHASE IV COA SELECTION

PHASE V EXECUTION PLANNING

PHASE VI EXECUTION



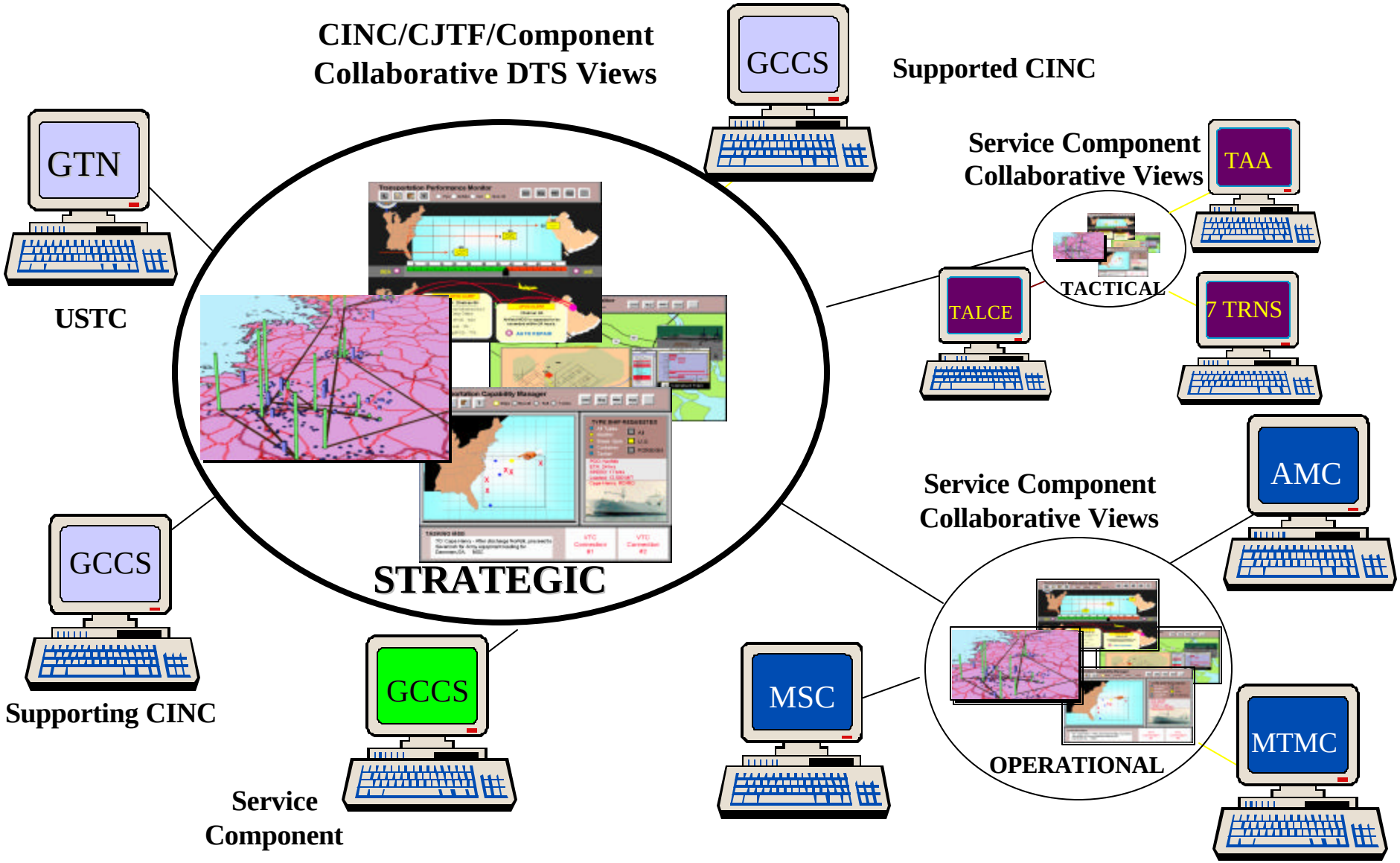
Impact:

Scheduling/Decision Support

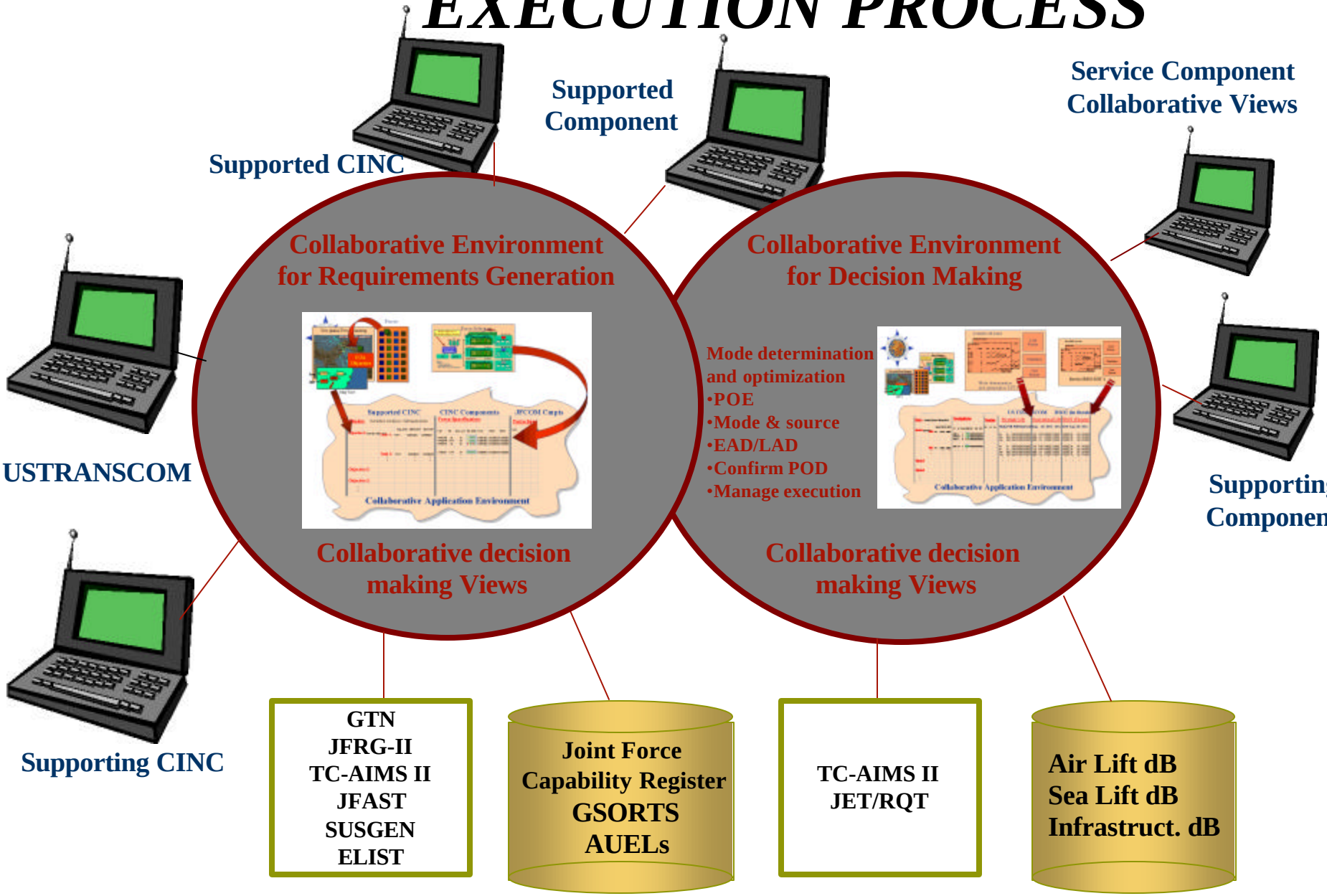
- **Collaborative DTS requirements capture**
- **Mode determination and asset scheduling to improve responsiveness and COA development**
- **Situational awareness. Collaborative Decision support tools to view, allocate and monitor scheduled and in-transit shipments and enhance reaction time of DTS operations**

AT2000 Technology Focus

INTEGRATED OPERATIONS -
"EXECUTION COORDINATION COMMUNITIES"

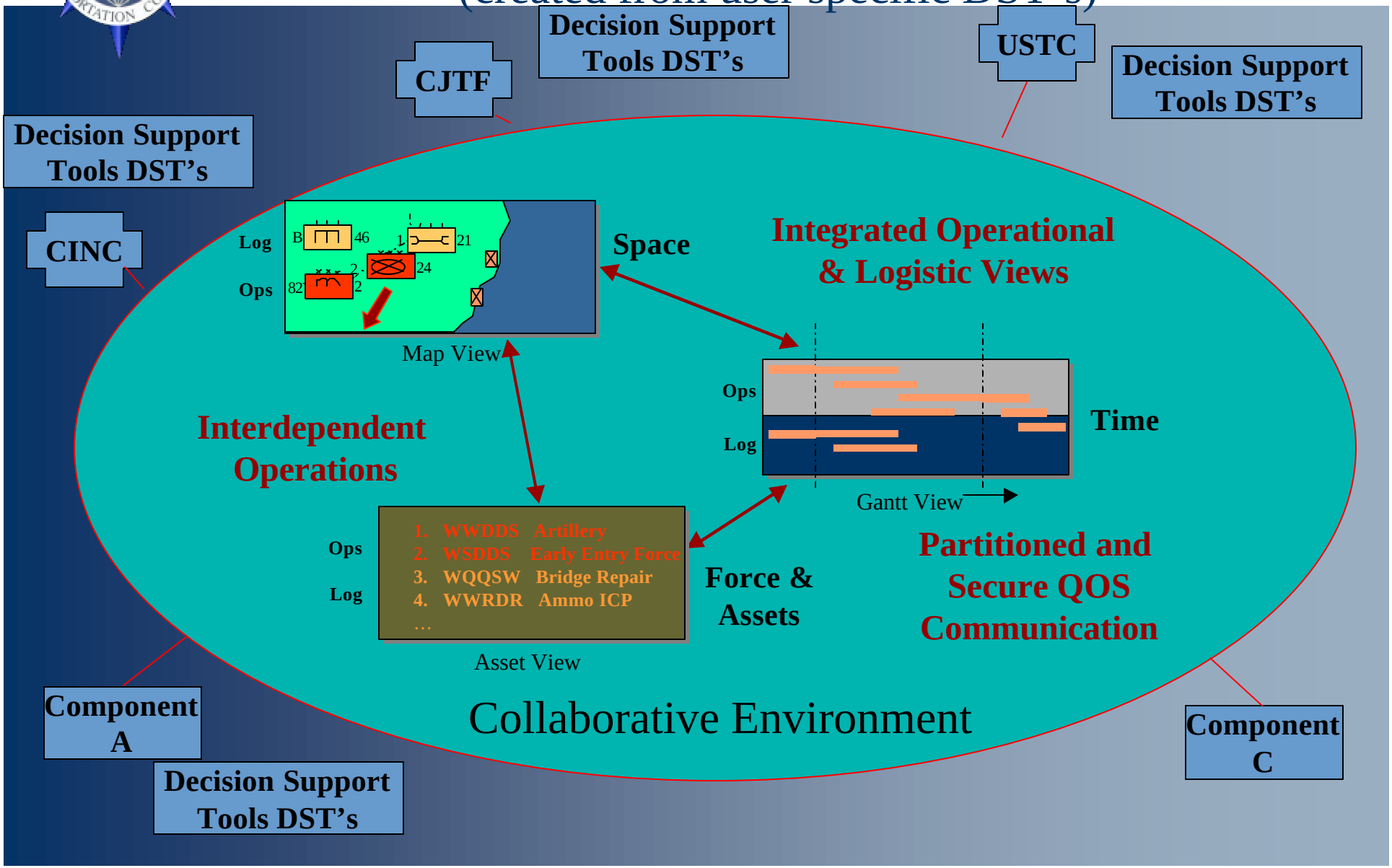


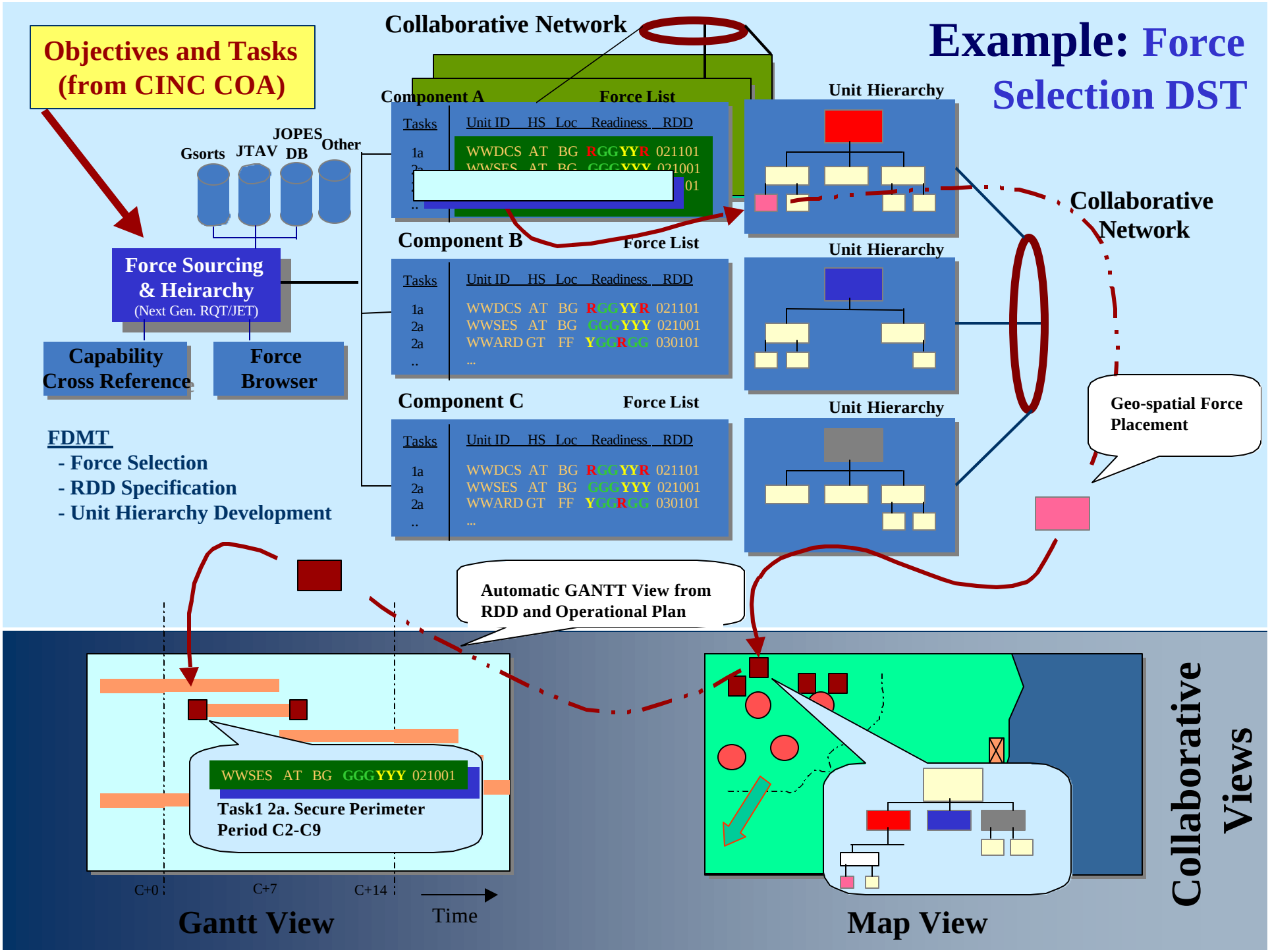
DEPLOYMENT MANAGEMENT AND EXECUTION PROCESS



COMMON REPRESENTATION OF OPERATIONAL DATA

(created from user specific DST's)

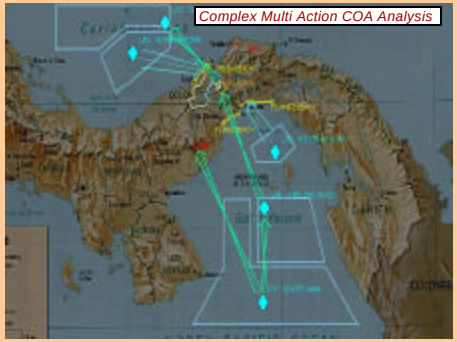



Example: Force Selection DST
Objectives and Tasks (from CINC COA)
Collaborative Network
Component A
Force List
Unit Hierarchy
Tasks
Unit ID HS Loc Readiness RDD
1a
WWDCS AT BG RGGYYR 021101
Gsorts
JTAV
JOPES DB
Other
Force Sourcing & Heirarchy
(Next Gen. RQT/JET)
Capability Cross Reference
Force Browser
Component B
Force List
Unit Hierarchy
1a
2a
2a
WWDCS AT BG RGGYYR 021101
WWSES AT BG GGGYYY 021001
WWARD GT FF YGGRGG 030101
Component C
Force List
Unit Hierarchy
Collaborative Network
Geo-spatial Force Placement
FDMT
- Force Selection
- RDD Specification
- Unit Hierarchy Development
Automatic GANTT View from RDD and Operational Plan
WWSES AT BG GGGYYY 021001
Task1 2a. Secure Perimeter
Period C2-C9
C+0
C+7
C+14
Time
Gantt View
Map View
Collaborative Views

Tailored DST's to Support an Execution Centric Process

Force Asset Selection DST's

Geo-spatial Force Planning



CJTF

USTC

Collaborative Environme

Space

Integrated O
& Logistic

Interdependent Operations

Ops

Log

Gantt View

Force & Assets

Asset View

Continuous Integrated Operations

Par

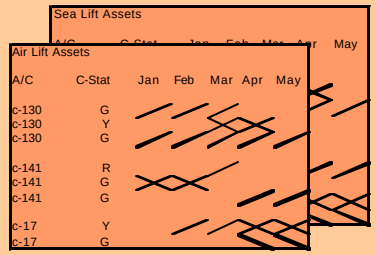
Communication

Component C

Lift Asset Selection DST's

Component

Available Lift Assets



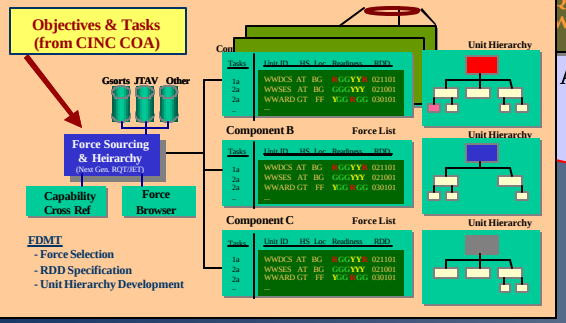
Load Factors

Schedulers

Cost Factors

AT-2000 DST's

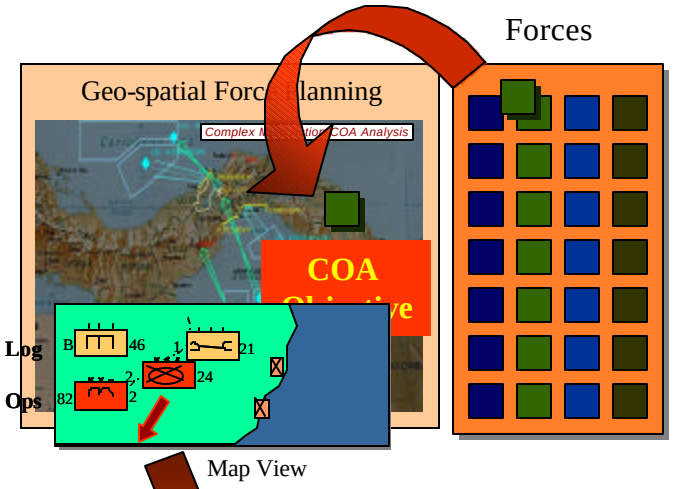
Force Selection

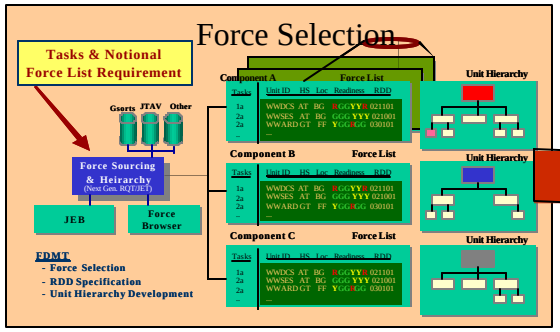


Unit Asset Selection DST's

EXAMPLE OF A COLLABORATIVE "APPLICATION" ENVIRONMENT

- "Shared" spreadsheet as a metaphor
  - All authorized users can "view" all asset-use data
  - Cells can be changed asynchronously by the "cell owners"
    - CINC → Mission, Objective, etc
    - Component → Unit ID, ALD,etc.
    - USTC → RLD, POE,Lift asset, schedule, etc.
  - Spreadsheet data can be used to generate the "asset", "geo-spatial" and "temporal" views at all levels
- Decision support tools enable "cell owners" to build their section of the spreadsheet.





Supported CINC

Mission: Humanitary Assistance - Earthquake Iambia

		Op_Area	Start DTG	End DTG
Objective 1:	Shelter Homeless			
	Task 1:	GGF	020102Z	023002Z
	Task 2:	FGT	020202Z	023002Z
	*		*	*
	*		*	*
Objective 2:				
Objective 3:				
*				
*				

CINC Components

Force Specification:

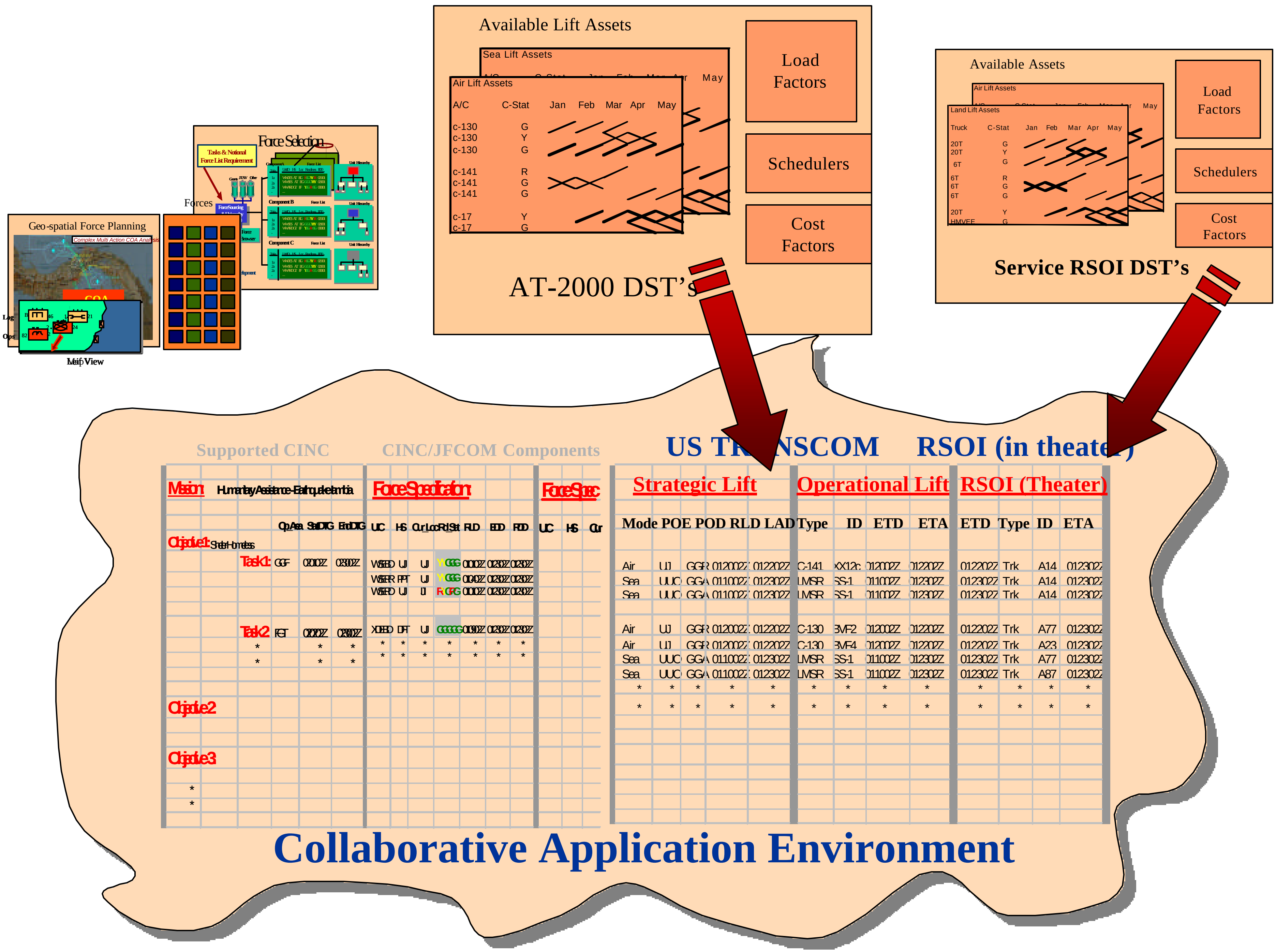
UIC	HS	Cur_Loc	Rd_Stat	RLD	EDD	RDD
WSEBD	UJ	UJ	YYGGG	010102Z	012302Z	012302Z
WSERR	PPT	UJ	YYGGG	010402Z	012302Z	012302Z
WSERD	UJ	IJI	RYGRG	010102Z	012302Z	012302Z
XDEBD	DFT	UJ	GGGGG	010902Z	012302Z	012302Z
*	*	*	*	*	*	*
*	*	*	*	*	*	*

JFCOM Cmpts

Force Spe

UIC	

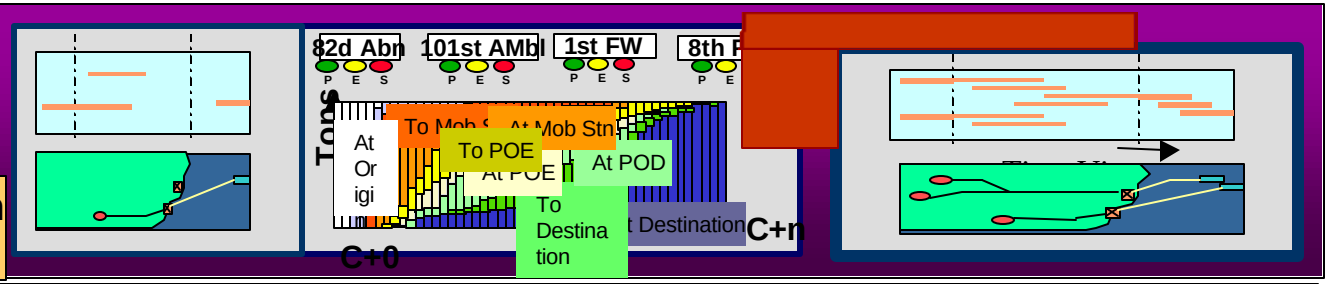
Collaborative Application Environment


Available Lift Assets
Sea Lift Assets
Air Lift Assets
A/C C-Stat Jan Feb Mar Apr May
c-130 G
c-130 Y
c-130 G
c-141 R
c-141 G
c-141 G
c-17 Y
c-17 G
Load Factors
Schedulers
Cost Factors
AT-2000 DST's
Available Assets
Air Lift Assets
Land Lift Assets
Load Factors
Schedulers
Cost Factors
Service RSOI DST's
Force Selection
Forces
Geo-spatial Force Planning
Supported CINC
CINC/JFCOM Components
US TRANSCOM
RSOI (in theater)
Strategic Lift
Operational Lift
RSOI (Theater)
Mode POE POD RLD LAD Type ID ETD ETA ETD Type ID ETA
Objective 2
Objective 3
Collaborative Application Environment

AT2000 EMPHASIS

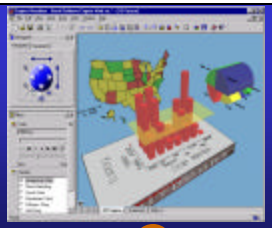
Tailored Views

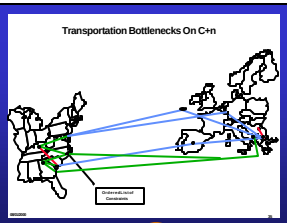
Feeds to Common DTS Picture

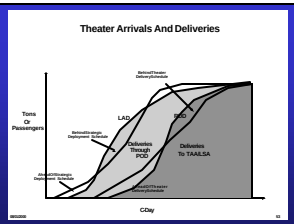


Optimization

Scheduling Tools







Integration

Integrated Data

Virtual Database

VDB

Data Source

Existing Databases

GTN

JOPES

GDSS

Data XYZ

A1. DTS REQUIREMENTS CAPTURE

- Provide a Collaborative Environment and Process for specifying and responding to all DTS movement requirements (Routine- Title 10 e.g SAAMs, channel, Contingency- TPFDD)
  - Between CINCs, USTRANSCOM, DLA and supporting Services
  - Using real versus notional data
  - Including continuous integrated sustainment
- Provide methods to share collaborative products and data with other user applications
  - Integrate data arriving from all requirements generation sources

Products

•Collaborative DST for specifying, sharing and manipulating movement requirements and Force Deployment data

- •Template/Forms support
- •Data sharing

•Force Package Specification Tools and Tables

- •Joint Forces Capabilities Register
- •Varying level of granularity
- •Cross Reference Tables (UTC/UIC) when needed

Candidate Technologies

•Collaboration Environment: (Collaboration Community - JTL ACTD)

•AI/Case Based Reasoning: (JADE - AFRL)

•Intelligent Agents: (MCC STRAT-ALP)

•Publish and Subscribe Services: (JBI-ESC, AFRL)

•Data Models: (DOWG, CDE-JTCC)

A2. MODE DETERMINATION & ASSET SCHEDULING

– Provide Mode Selection and Asset Scheduling Tool(s)
  - **Responsive and Near Real Time**
    – **Rules of thumb mode selection early in COA**
    – **Continuous and interactive**
    – **Varying degrees of detail wrt force requirements**
    – **Multi-attribute objective function to include cost, QoS and unit integrity**
  - **Globally integrated requirements**
  - **Monitors for sked process (arrival, delay, canx, re-route)**
  - **All levels of DTS management and execution**

•Products

•Near Real Time Multi-modal scheduling tool in MCC

•Cost trade-off analyses
•Interoperable with TCC schedulers
•Integrated requirements visualization
•Virtual Fleet Toolkit
•Hub and Spoke definition
•Collaboration on infrastructure use

•DTS Schedule Display platform

•Candidate Technologies

•Supply Chain Mgmt Capabilities: (i2, Manugistics)
•Scheduling engines: (Genetic and heuristic, algorithms-BiosGroup, Kestrel, CMU)
•Intelligent agents: (ALP)
•Collaboration: (JTL ACTD)
•Activity based costing: (FERET-DARPA)

A3. DTS SITUATIONAL AWARENESS

- Provide Comprehensive DTS Picture
  - **User tailorable views**
    - **Status**
    - **Infrastructure**
  - **Collaborative**
- Provide tools for Decision Maker
  - **Watch boards**
  - **ITV status**
  - **PvA**
  - **Flow Analysis Tools**
    - **Bottleneck Analysis**
  - **Cost Analysis**
  - **Impact of changes of Data on the Schedule**

•Products

•Force projection visualization:

•Integrated requirements visualization

•Automated Briefing Generation

•Planning and Execution monitoring tool

•Analysis

•Collaboration

•DST/Web portal for query and display of DTS Corporate DB

Air, sea and land transportation and personnel assets (including host nation)

•Fleet inventory, capacity, allocations, and costs, availability and location

•ITV

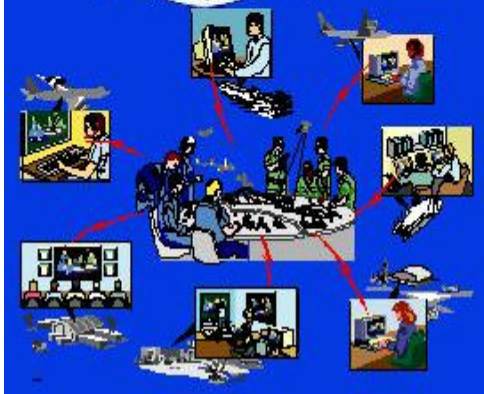
•Drill down

•Capacity/Integrity of Infrastructure

•Ports and routes and environment

•Candidate Technologies Collaboration &Visualization: CINC21;AutoBrief-CMU;JBI-ESC, AFRL;IFGR -USAF-AMC ;Data Wall (AFRL, SPAWAR)

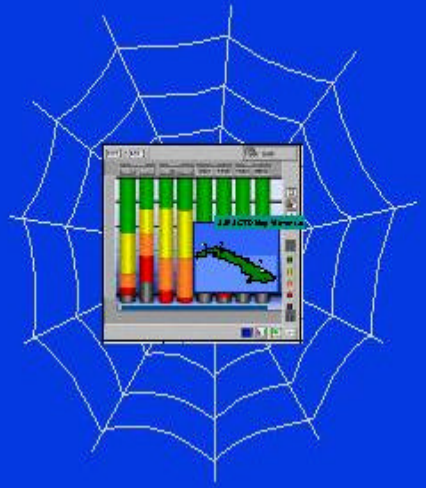
Agile Transportation for the 21st Century AT2000



COLLABORATIVE

IMMERSIVE

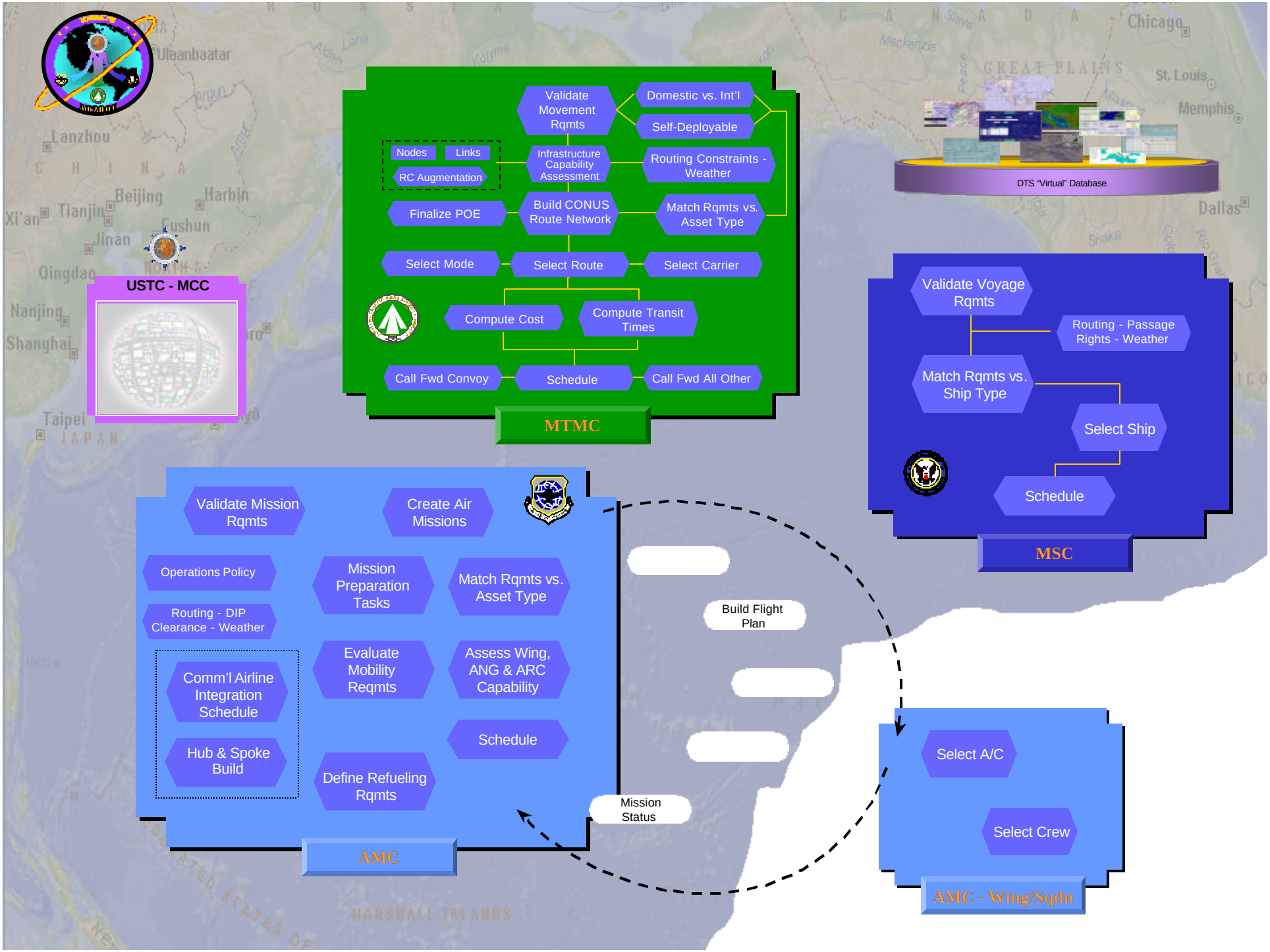
INTERACTIVE



WEB BASED

INFORMATION-RICH VISUALIZATIONS

FUSED DATA


Validate Movement Rqmts
Domestic vs. Int'l
Self-Deployable
Nodes
Links
RC Augmentation
Infrastructure Capability Assessment
Routing Constraints - Weather
Finalize POE
Build CONUS Route Network
Match Rqmts vs. Asset Type
Select Mode
Select Route
Select Carrier
Compute Cost
Compute Transit Times
Call Fwd Convoy
Schedule
Call Fwd All Other
MTMC
DTS "Virtual" Database
USTC - MCC
Validate Voyage Rqmts
Routing - Passage Rights - Weather
Match Rqmts vs. Ship Type
Select Ship
Schedule
MSC
Validate Mission Rqmts
Create Air Missions
Operations Policy
Mission Preparation Tasks
Match Rqmts vs. Asset Type
Routing - DIP Clearance - Weather
Evaluate Mobility Reqmts
Assess Wing, ANG & ARC Capability
Comm'l Airline Integration Schedule
Schedule
Hub & Spoke Build
Define Refueling Rqmts
AMC
Build Flight Plan
Mission Status
Select A/C
Select Crew
AMC - Wing/Sqdn

LEVERAGE EXISTING TECHNOLOGY

PILOT OPERATIONAL CAPABILITY

- Collaborative Decision Support Tools
  - Requirements capture.
- Analysis tools that can be used to improve the cost efficiency of the DTS
- DTS Visualization Framework.
  - Force Projection
  - Routine Title 10

AT2000 SCHEDULE

2002

Architecture
- **Ops Concept & functional Arch.**
- **User data sources and repositories**

Requirements Capture
- **SW Stub for Req. Generator**
- **Create initial prototype**

Collaborative Environment
- **Operational construct - spreadsheet metaphor)**
- **Create initial prototype**

Data Access
- **Warehouse/direct access methods**
- **Drill down for asset use data**

Scheduler & Cost Apps
- **Evaluate/select Mode and transport schedulers**
- **Evaluate/select potential lift allocation models**

Visualization
- **Initial collaboration environment**

Demonstration & MUAs

2003

Architecture
- **Distributed architecture**
- **Application insertion**

Requirement Capture
- **Initial requirements generator**
  - **JFCOM FP2010**
- **Component demonstration**

Collaborative Environment
- **Shared view of data**
- **Component demonstration**

Data Access
- **Lift capacity analysis tool**
- **Component demonstration**

Scheduler & Cost Apps
- **Continuous Mode selection**
- **Initial cost analysis tool**

Visualization
- **Viz. for capacity & asset utiliz**
- **Asset/temporal/spatial views**

Demonstration & MUAs
- **Initial system MUA**

2004

Architecture
- **Continuous dist. Operations**
- **Integration with legacy systems**

Requirement Capture
- **Operation with JFCOM FP2010**
- **Component demonstration**

Collaborative Environment
- **Commitment of resource to reqmt**
- **Component demonstration**

Data Access
- **GTN data base access/write**
- **Component demonstration**

Scheduler & Cost Apps
- **Cost optimization scheduling**
- **Load balancing (commercial and military)**
- **Bottleneck analysis**

Visualization
- **Cost visualization**
- **Plan vs actual**

Demonstration & MUAs
- **End-to-end system demo**
  - **JFCOM**
  - **USTC**

2005

Architecture
- **Residual transition/ hardening**
- **System MUA**

Requirement Capture
- **Residual transition/ hardening**
- **System MUA**

Collaborative Environment
- **Residual transition/ hardening**
- **System MUA**

Data Access
- **Residual transition/ hardening**
- **System MUA**

Scheduler & Cost Apps
- **Residual transition/ hardening**
- **System MUA**

Visualization
- **Residual transition/ hardening**
- **System MUA**

Demonstration & MUAs
- **Residual transition/ hardening**
- **System MUA**

FUNCTIONALITY

AT2000
An ACTD For Force Projection

"AGILE TRANSPORTATION FOR THE 21ST CENTURY"

- Objectives
  - Provide cost effective airlift to the Services through improved mode determination and asset scheduling
  - Provide Defense Transportation System (DTS) global situational awareness

- **Technology**
  - **Intelligent Agents**
  - **Collaboration**
  - **Data: Warehouse/Mediation/Mart**
  - **Real time Multi-modal Schedulers**
  - **Transportation Web Portal**
- **Residual**
  - **Collaborative DTS Platform**
  - **Transportation Cost Analysis Tool**
  - **Force Catalog/Sustainment Generator**

- **Participants**
  - **TRANSCOM, PACOM, JFCOM, CENTCOM, EUCOM, Services**
- **Schedule**
  - **FY 2002 DTS Collaborative Platform**
  - **FY 2003 Cost and Flow Analysis Tools**
  - **FY 2004 Comprehensive DTS Movement Requirements and Mode Determination**
  - **FY 2005 Intermodal Analysis and Situation Awareness, Transition**

- **Comments**
  - **Structure AT2000 around proven Supply Chain Management Principles**
  - **Following MOEs established**
    - **Reduce cost of DTS services to the customer by 7%**
    - **Provide transportation plan (e.g. schedule) to Supported CINC within four hours following receipt of movement requirements**

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